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## CLAIM AMENDMENTS

A listing of an entire set of claims 1-32 is submitted herewith per 37 CFR §1.121 to replace all prior versions, and listings, of claims in the application.

 (Currently Amended) A method for timing recovery in a communication system using cyclic extension of a plurality of symbols, the method comprising: computing ensemble correlation function [output] from the plurality of symbols;

determining a valid sampling region based on a width of a plateau of the ensemble correlation function [output]; and

determining at least one sampling position for at least one symbol based on the valid sampling region.

- (Currently Amended) The method of claim 1, further comprising defining the valid sampling region based on a comparison of the ensemble correlation function [output] to a threshold.
- (Currently Amended) The method of claim 1, further comprising: filtering the ensemble correlation function [output].
- (Original) The method of claim 3 wherein the filtering occurs prior to determining the valid sampling region.
- (Currently Amended) The method of claim 3, further comprising: using a median filter to filter the ensemble correlation function [output].
- (Currently Amended) The method of claim 1, further comprising: determining a peak value included in the ensemble correlation function [output].

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 (Previously Presented) The method of claim 6, further comprising: determining a threshold as a function of the peak value.

## 8. (Currently Amended) A system, comprising:

a correlator for computing an ensemble correlation function [output] from a plurality of received symbols; [and]

a subtractor, operatively coupled to the correlator, for determining a valid sampling region based on a width of a plateau of the ensemble correlation function foutput: and

a sampling position selector, operatively coupled to the correlator, for determining at least one sampling position for at least one symbol based on the valid sampling region.

- (Currently Amended) The system of claim 8, further comprising:
  a filter, operatively coupled to the correlator, for filtering the ensemble correlation function [output].
- (Currently Amended) The system of claim 9, further comprising:
  a maximum detector, operatively coupled to the filter, for determining a peak value included in the filtered ensemble correlation function [output].
- 11. (Currently Amended) The system of claim 8, further comprising: a comparator, [operatively coupled to] <u>operatively coupling</u> the correlator <u>to</u> the subtractor and the sampling position selector, for comparing the ensemble correlation function [output] to a threshold to define the valid sampling region.
- 12. (Original) The system of claim 8, for use in a receiver.
- 13. (Original) The system of claim 12, wherein the receiver is wireless.

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14. (Original) The system of claim 8, further comprising: at least one phase locked loop for tracking edges of the plateau.

15. (Currently Amended) A method for estimating [delay spread] <u>delay-spread</u> in a communication system using cyclic extension of a plurality of symbols, the method comprising:

computing an ensemble correlation function [output] from the plurality of symbols; and

using the ensemble correlation function [output] to estimate the delay-spread.

16. (Currently Amended) The method of claim 15, further comprising: comparing the ensemble correlation function [output] to a threshold to define a valid sampling region; and subtracting a width of the valid sampling region from a length of

the cyclic extension of a symbol to obtain the estimate of the [delay spread] <u>delay-spread</u>.

- (Currently Amended) The method of claim 15, further comprising: filtering the ensemble correlation function [output].
- (Currently Amended) The method of claim 17, further comprising: using a median filter to filter the ensemble correlation function [output].
- (Currently Amended) The method of claim 15, further comprising: determining a peak value included in the ensemble correlation function [output].

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- (Previously Presented) The method of claim 19, further comprising: determining a threshold as a function of the peak value.
- (Currently Amended) The method of claim 16, wherein threshold crossing points of the ensemble correlating function [output] define the valid sampling region.
- (Currently Amended) A system for estimating delay-spread in a communication system using cyclic extension, comprising:
- a correlator for computing an ensemble correlation function [output] from a plurality of symbols; and
- a delay-spread estimator, operatively coupled to the correlator, for estimating the delay-spread.
- (Currently Amended) The system of claim 22, wherein the [delay spread] delay-spread estimator includes:
- a comparator, operatively coupled to the correlator, for comparing the ensemble correlation function [output] to a threshold to define a valid sampling region; and
- a subtractor, operatively coupled to the comparator, for subtracting a width of the valid sampling region from a length of the cyclic extension of [the] <u>a</u> symbol to obtain the estimate of the [delay spread] delay-spread.
- (Currently Amended) The system of claim 22, further comprising:
  a filter, operatively coupled to the correlator, for filtering the ensemble correlation function [output].
- (Currently Amended) The system of claim 24, further comprising:
  a maximum detector, operatively coupled to the filter, for determining a peak value included in the filtered ensemble correlation function [output].

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(Original) The system of claim 22, for use in a receiver.

- 27. (Original) The system of claim 26, wherein the receiver is wireless.
- (Currently Amended) A method for adapting a receiver in a communication system using cyclic extension of a plurality of symbols, the method comprising: computing an ensemble correlation function [output] from the plurality of symbols:

 $\label{thm:continuous} determining a \ multipath \ channel \ characteristic \ based \ on \ the \\ ensemble \ correlation \ function \ [output]; \ and$ 

adapting the receiver based on the multipath channel characteristic.

- (Original) The method of claim 28, wherein the multipath channel characteristic is delay-spread.
- (Original) The method of claim 28, wherein the step of adapting comprises: determining one or more coefficients of a channel estimation filter in the receiver.
- 31. (Previously Presented) The method of claim 28, wherein the step of adapting comprises:

identifying an inter-symbol-interference free portion of the cyclic extension of a received symbol; and

combining the inter-symbol-interference free portion of the cyclic extension with the received symbol.

32. (Currently Amended) The method of claim 28 wherein the step of adapting comprises:

determining at least one sampling position for at least one symbol based on the [multi-path] multipath channel characteristic.